

XXXVII.—*Excursion of an Insect Hunter in the Carinthian Highlands.* By Dr. NICKERL of Prague*. Communicated by A. H. HALIDAY, Esq.

I ARRIVED at Gastein on the 30th of July, and from this, having crossed the fells† of Nassfeld and Mallnitz, I took the road up Moell-dale to Heiligenblut. This village lies on the eastern slope of the fell of the same name, scarcely an hour's walk from the source of the Moell, at an elevation of 4000 feet above the level of the sea, and in its poverty and loneliness presents anything but a cheering picture. The river Moell, which takes its rise from beneath the glacier that lies on the eastern side of the Grossglockner, five hours' distance from Heiligenblut, receives in its course many little mountain-torrents, and waters the valley which bears its name, and which, running in a direction from the north towards the south-west, opens a succession of romantic scenery. The banks of the stream, for the space of a league from its source, are overgrown with alder bushes, through which the path to Heiligenblut leads. Ridges of rock, of the most grotesque forms, from 7000 to 8000 feet in height, bound the valley on the west. These, inaccessible to the foot of man on their eastern face towards the valley, are wooded here and there with fir-trees, beech and larches; and a charming waterfall, named from an old legend, of which it was the scene, the "Maiden's-leap," arrests the gaze of the visitor. On the mountain slopes to the east of the valley, tillage and grass-fields alternate with insulated tracts of woodland, and the homely cottages of the mountaineers scattered in the intervals. The head of the valley is barely a quarter of a league across, but gradually it widens, and cultivation appears more and more, as the mountains which inclose it diminish in elevation.

The most interesting of all the excursions in the environs is to the Pasterze, and, by way of this, to the Gems-grube, which lies above Heiligenblut, five leagues to the northward. This spot, to the botanist a classical locality, where the rarest alpine plants are found in the greatest variety, is not less attractive to the entomologist, as the extent of the annexed list testifies. The path to it leads over the first (or lower) Sattel, and winds upwards athwart the face of the mountain. After an easy ascent for an hour among fir-trees, larches, and fragments of rock completely clothed with the most elegant mosses, the terrace of the first mountain-range is attained, on which a number of the dairymen's huts are seated between woods and cattle-walks. Here *Doritis Apollo* was not

* From the Journal of the Entomological Society of Stettin, 1845.

† "Tauern," provincial term, subalpine ranges on which the snow melts.

uncommon, flitting about the face of the precipice; solitary specimens of *Hipparchia Nerine* too occurred. Magnificent ferns were growing luxuriantly in crevices of the rocks, and *Campanula pusilla* with its pretty bells had taken root everywhere on the crumbled surface of the blocks of stone. For another short hour the path continues at this elevation over several little hills, where woodland, moist meadow and debris of rock alternate, past St. Bridget's chapel, from which there is a distant view westward of the Leiterbach, as it rushes thundering down its alpine dike to mingle with the waters of the Moell. Here, not far from its source, the river finds its way through a deep ravine, inaccessible all the way from the plain of ice to the lower Sattel, where the valley properly speaking begins. Along the brow of the mountains which hem in the ravine on the eastern side, the path ascends, by successive stations, among stunted pines interspersed with magnificent lawns, where the crimson blossoms of the Rhododendron blend with tall-stemmed Monkshood and the intense azure of the Gentianella. About the perpendicular cliffs, *Argynnis pales* and various species of *Hipparchia* were on the wing. The lovely *Lycæna eurýbia*, *eros*, *orbitulus*, *phertes*, and delicate kinds of *Psodos*, here give full occupation to the collector, and make the choice embarrassing among the superabundance of riches. The path now turns abruptly round a jutting angle of the mountain, bringing at once into sight the sea-green pinnacles of the glacier by which the ravine is terminated, and from the heart of which the Moell gushes forth. They form a contrast truly grand with the rich vegetation of so vernal a character that is spread all around. From this the Platte (a scarpment of rock through which a rather precipitous path is cut) has to be ascended, in order to reach the Brettboden, which overlooks a great portion of the plain of ice. A countless multitude of Saxifrages with the most exquisite blossoms curtain the walls of rock, and the White Everlasting of the Alps (*Gnaphalium leontopodium*) has its lowest limit here. Rare species of *Carabus* and *Nebria* there are to delight the entomologist; and the black salamander (*S. atra*) is found in plenty by turning over the massive slabs which rest on the damp turf.

The last stunted pine now disappears, and the path continues among the finest mountain meadows, descending a little through the Pfandlscharte, a narrow dell at the foot of the upper Sattel, lying eastward from, and rather below the level of, the plain of ice. Having crossed the Schartenbach, which pours itself into the fissures of the ice, the southern slope of the higher Sattel is reached. The mountain rises 9000 feet above the sea level, and at its foot lie flowery meadows, the haunts of the finest kinds of Lepidoptera. While I recommend this spot to the entomologist's

attention, in respect to the numerous rarities it affords, I must not forget to warn him of the danger which attends collecting here. The fall of great stones and blocks from the heights, detached either by the progressive decay of the rock, or from the melted snow in sunny weather insinuating itself among the crevices, is an every-day occurrence. I myself saw a falling stone strip the scalp off a herd-boy to the brows, from the effect of which he tumbled down stunned from the spot on which he was, and sustained some dangerous injuries.

The partial ascent of the upper Sattel, which is next to be accomplished, is rather more laborious; for although the path is not very steep, the blocks which lie strewn all about and the loose stones make it arduous. The western angle of the mountain once attained, the pedestrian's toil is amply recompensed by the sight of the gigantic pyramid of the Grossglockner with its two peaks of ice. In a short half-hour the descent is made to the plain of ice, over which a great sweep is taken to reach the precipice on the east, called the Gems-grube.

The plain of ice, the Pasterze* as it is called, lying 8000 feet above the level of the sea, is a league and a half long by three-quarters wide, and is traversed by a multitude of deep cracks, which generally originate at the middle, running towards the east and west, and which must be avoided by taking a circuit where they are too broad to be leaped. To the east it is inclosed by the upper Sattel and the Gems-grube; to the west by the rocky ridges and ice-blocks of the Grossglockner, and northwards by the Johannisberg covered with perpetual snow; while southward it stretches away to the ravine in which the Moell has its outlet. After three-quarters of an hour of circuitous deviation and leaping over ice-cracks, the grand object, the Gems-grube, is reached. This lies, as was mentioned before, eastward of the plain of ice, and presents an abyss between the opposite precipices, in which the melted snow from the heights collects, and is drained off into the crevices of the ice. The chamois is often to be seen here, from which the spot derives its name, Gems-grube, the Chamois'-hole.

Here and there the face of the rock is diversified with patches of green sward and with lichens of a pale grayish shade, and though the place at first sight seems to yield but a scanty herbage, it is in truth rich in plants, and will still, in spite of difficulty, be sought by the ardent lover of nature for the sake of the unrivalled prospect of the Grossglockner. *Brya alpina* and the rare *Zomatogonium carinthiacum* reward the botanist,—the rare *Melitæa asteria*, and many species of Lepidoptera besides,

* From *Passeriza*, in Slavonic a meadow; from the nature of the ground over which the road to it passes.

the entomologist,—for the toil of clambering among the steep and rugged acclivities.

Although I have specified this spot as the richest mine of rare species, I was not able myself to visit it more than once during a stay of four weeks. On two other occasions I ascended as far as the upper Sattel, and when I had got a view, from its jutting shoulder, over the ice plain towards the Gems-grube, I was obliged to turn back disappointed, from the quantity of snow that had fallen there. And in truth this (1844) has been one of the most unfavourable seasons I could have fixed on for my excursion. Storm and snow often drove me back with my boxes empty, or kept me shut up in the house for days together; the precious time passing away heavily without a determinate object, while repiningly I turned over the leaves of the books I had brought along with me.

Not more fortunate was an excursion to the Leiter, which is indeed rich in plants and probably in insects also, but *that* Cat's-bridge, a pass of a league in length, where all one's attention is incessantly required to avoid falling over the precipice, is not well-adapted for collecting insects.

On the other hand, three excursions which I made to the Moharkopf and the Astner plains were very productive. There I found, to my not small delight, *Hepialus ganna*, a species I had never seen before, on the wing in open day. An excursion to the Alp-horn of Zirknitz too procured me, in addition to the species of *Salmo* peculiar to that locality, an extremely interesting new *Chiton*, the first of the genus that has to my knowledge been found in fresh water.

On my return I stopped for eight days at Salzburg, where a careful inspection of private collections, as well as of the extensive one belonging to the Prince Archbishop of Schwarzenberg, has enabled me to submit to the scientific public the annexed commencement of a 'Fauna Lepidopterorum' of Salzburg. My desire is, that this, imperfect as it is, may serve as an introduction to the riches of this nearly unexplored district, and may induce many of my entomological friends to frequent excursions in that direction.

PAPILIONIDÆ.

*Melitæa maturna**. *M. cynthia*, three specimens taken in the meadows of the Brettboden, elevation 7000 feet. Its season seems to be the month of July. Inhabits high mountain ranges. *M. artemis**. *M. merope*, a few were found on the 9th of August about the precipices of the Gems-grube above the Mer de Glace; they were quite fresh. The insect is very wild and difficult to catch on account of its rapid flight and the nature of the ground. *M. cinzia*, *didyma*, *phæbe*, *dictynna*, *athalia*, *parthenia**. *M. asterie*, a species ex-

tremely rare and little known. Found on the most abrupt and elevated declivities, and where the vegetation was most scanty. In these desert spots they hover singly, with slow motion, over the scattered patches of turf overgrown with the common gray lichen. The Moharkopf near Döllach, and the precipices above the Pasterze at Heiligenblut, are its haunts. Its season the latter half of July.

*Argynnis selene**. *A. euphrosyne*, I found a specimen on the lower Sattel, at the height of 5000 feet. *A. dia*** . *A. pales*, common in Carinthia over all alpine meadows from 5000 to 8000 feet elevation, where it is found about the various species of *Hieracium* abundant there. On the highest alps the females have the wings darker-coloured, sometimes with a steel-blue gloss, or entirely white shaded with black. Both these varieties pair with the common form. *A. hecate*, *ino* (*amathusia*), *latona*, *niobe*, *adippe*, *aglaia*, *paphia** , var. *valesina*, found in Moell-dale, ♀ only, and paired with the common *A. paphia*. This new species therefore must be struck out of our lists. It is related to *paphia* as *isis* to *pales*. *A. paphia* was abundant in the spots where *valesina* occurred.

*Vanessa cardui*** , everywhere, extending even to the highest alps. *V. atalanta*, *io*, *antiopa*, *polychloros*, *xanthomelas*** . *V. urticae*** , in all states, on the highest alpine meadows. *V. c-album** . *V. prorsa* ; I found the caterpillar not rare, with its web, among the leaves of *Urtica diæca*, on the way from Bockstein to Nassfeld on the 31st of July. A month later the butterfly was abundant in the valley of the Salzach.

Limenitis cucilla, *sibilla*, *carilla*, *populi** .

Apatura iris, *ilia*, var. *clytie** , var. *eos*, a fine specimen taken in Moell-dale.

Hipparchia proserpina, *hermione*, *alcyone*, *briseis*, *semele*, *statilina*, *phædra** . *H. aello*, very rare, about the rocky slopes above the glacier near Heiligenblut. The specimens taken in the beginning of August were already much wasted. *H. janira** , *eudora*, *hyperanthus*** . *H. dejanira** . *H. hiera*, on the way to the Leiter, near Heiligenblut. *H. mæra*, *megæra*, *ægeria*, *galathea* var. *leucomelas** . *H. cassiope*, single specimens found in the elevated meadows on the road to the Pasterze ; more common in the Gems-grube. *H. pharte*, a few specimens below the Tauernhaus in the valley towards Rauris, after the middle of August. *H. melampus*, in open spots among the stunted firs ; generally diffused, but nowhere common. *H. pyrrha*, only in the little mountain meadows under the Platte near Heiligenblut : not common. *H. medusa** . *H. nerine*, one of the rarer alpine species. I found only three wasted specimens, on the 3rd of August, in wooded rocky spots on the lower Sattel. It seems not to extend beyond the wooded region, as it likes shady places. *H. medea*, *ligea*** ; of the former species fine varieties. *H. euryale*, common on the way from Bockstein to the Nassfeld : rarer in Carinthia. *H. pronoe*, one of the commonest kinds in the alps. *H. gorge*, at the Leiter, on the rocks of the tarn of Zirknitz, and about the Astner plains near Doellach, sparingly. *H. manto* ; this rare butterfly frequents the highest spots of the fells of Nassfeld and Mallnitz, as well as the

Gems-grube above Heiligenblut. Its flight is wavering and unsteady; a few paces from the spot where it rose, it darts down again among the herbage, so that it is often difficult to find it again. July is its time of appearance. *H. tyndarus*; every excursion in the higher grounds afforded this butterfly in plenty. I found at the Gems-grube a handsome variety with a silvery-white gloss over the entire lower surface. *H. davus*, *pamphilus*, *iphis*, *hero*, *arcania**. *H. satyrion*; this pretty species was abundant over the meadows of the Pasterze and the Pfandscharte. Season August.

Lycæna arion, *alcon*, *euphemus*, *erebus*, *cyllarus*, *acis*, *argiolus*, *damon*, *alsus**. *L. pheretes*, solely, and sparingly, on the most elevated meadows above Heiligenblut, before the turn of the road round the mountain; early in August. *L. daphnis**. *L. corydon*, I found in the valley towards Rauris at an elevation of 4000 to 5000 feet. All the specimens were of the variety in which the colouring of the underside is dull, as in the var. *ixora* of *H. syllius*. *L. dorylas**, I found perfectly fresh specimens after the middle of August, on a mountain meadow lying 5000 feet high. *L. adonis*, *icarius*, *alexis**. *L. eros*, *orbitulus*; both species in tolerable plenty on the meadows through which the road to the Pasterze passes. *L. agestis*, *eumedon*, *argus*, *ægon*, *amyntas*, *polysperchon*, *hylas*, *battus*, *chryseis**. *L. eurybia*, in the elevated meadows on the hither side of the turn of the road mentioned before; also above the Platte, but is rare. August. *L. virgaureæ*, *phlæas*, *lucina*, *rubi*, *quercus*, *spini*, *ilicis*, *w-album*, *pruni*, *betulæ***.

*Papilio podalirius**, *P. machaon***.

*Doritis apollo*** , throughout the summer, in the environs of Salzburg, in the valleys of the Salzach and the Moell. *D. delius*, only among the alps. In the Pfandscharte hard by the glacier of Heiligenblut, and on the Rauris-fell, it was still in fresh condition at the end of August; while specimens taken on an excursion to the Leiter early in that month were quite wasted. It is rare. *D. mnemosyne***.

Pontia crategi, *brassicæ*, *rapæ*, *napi*** . The last three often deceived me among the alps, where I mistook them at a distance for *P. calidice*. Var. *brionice* in a dell of a wood at Sagritz. *P. calidice*, a single wasted specimen (♀) of this rare butterfly was taken in the Gems-grube. July seems to be the season for it. *P. daplidice**. *P. cardamines*, *sinapis***.

Colias edusa var. *helice*, *chrysotheme**. *C. phicomone*, abundant in elevated alpine meadows; is said also to occur rarely on the Geisberg near Salzburg. *C. hyale**. *C. palano*, found in former years on the Nassfeld. *C. rhamni***.

Hesperia malvarum var. *althææ*, *carthami**. *H. fritillum*, rare, in high alpine meadows. *H. alveolus*, *sertorius*, *tages*, *paniscus*, *sylvanus*, *linea*, *lineola**. *H. comma**, also on the highest alps.

SPHINGIDÆ.

*Atychia statices**.

At. chrysocephala, n. sp. Thorace abdomine alisque anticis cæruleo-viridibus, posticis fuscis, antennis valde pectinatis, capite auro-micante.

Size of *At. infausta*, but most nearly allied to *At. statices*. The processes of the antennæ are much longer, and not so close-set as in that species. The front, thorax and abdomen have a number of fine gray hairs standing singly, which are not found there. The head has a bright golden gloss, set off by the contrast of the hairy body, while the head and thorax appear of a uniform colour in *statices*. The present species also is but half the size, and does not occur at a lower elevation than 7000 feet. Found about the Pasterze in August, hovering in the sunshine and sitting in pairs on flowers.

*A. pruni**.

*Zygæna minos*** , on the highest alps as well as in the lowlands. *Z. scabiosæ, achilleæ**. *Z. exulans*, in alpine meadows 6000 to 7000 feet high; flying singly and not common. In August the specimens were generally wasted. *Z. meliloti, loniceræ, filipendulæ*** . *Z. hippocrepidis*, a few specimens only in a coppice below Döllach. *Z. angelicæ, peucedani, ephialtes, falcata, onobrychis**.

*Syntomis phegea**.

*Sesia apiformis, asiliformis, culiciformis, mutillæformis, tenthrediniformis***.

*Macroglossa fuciformis, bombiliformis**. *M. croatica** , on the authority of Freyer. *M. stellatarum, ænothæ**.

*Deilephila nerii, celerio**. *D. elpenor, porcellus, galii, euphorbiæ***.

*Sphinx pinastri, convolvuli, ligustri**.

*Smerinthus tilix**. *Sm. ocellata, populi***.

BOMBYCIDÆ.

*Saturnia spini** , *carpini***.

*Aglia tau*** . *Endromis versicolor**.

*Harpyia vinula, erminea, bicuspis, bifida, fagi, milhauseri**.

*Notodonta tritophus, ziczac, dromedarius, cucullina, camelina, argentina, palpina, plumigera, dodonæa, chaonia**.

*Cossus ligniperda, æsculi**.

*Hepialus humuli**. *H. carnus*, said to occur at an elevation of 7000 feet. *H. sylvinus**. *H. ganna*; I found this rare moth flying in the sunshine on the highest mountains of Carinthia; from the rapidity of its flight it is very hard to catch. It varies much. Time the middle of August.

*Lithosia quadra, griseola, complana, aureola, rubricollis, rosea, roscida**.

L. melanomos, n. sp. Alis anticis obscure fulvis nigro-punctatis, costis duabus nigris, posticis fuscis, collari et scapulis atris.

Found in the immediate environs of the Grossglockner at an elevation of 9000 feet. It appeared after a shower, flying heavily and solitary. The black collar and tippets, the wing-ribs black from their origin, the sooty shade, combined with the locality, distinguish it from *L. roscida*, to which it comes near in appearance as well as size.

L. freyeri, n. sp. Alis omnibus pallide helvaceis, anticis angustis, seriebus tribus punctorum minimorum.

Also found on the Carinthian alps, fluttering heavily in the sun-

shine about the face of rocks, in the month of August. Intermediate between *L. roscida* and *L. irrorea*. Size of the former, from which it is distinguished by the arrangement and smaller size of the black dots, the outline of the wings, and the gray colour of the underside in the fore pair. From *L. irrorea* it differs by the smaller size, outline of the wings, and by its pale colour.

L. irrorea occurs solitary both in Moell-dale and among the alps, but seems not to ascend above the limit of the pines. *L. eborina*, *ancilla*, *mundana**.

Psyche. Not a single specimen of this genus occurred in the perfect state, though so abundant in the earlier stages. It may seem incredible when I say, that in an excursion over the grassy slopes behind the turn of the road above Heiligenblut, at an elevation of 8000 feet, I came to a spot where a species of *Psyche* was in such abundance, that on looking fixedly at the ground, overspread with stones from the heights and a scanty sward, it appeared to be all in motion, like a populous ant-hill, so that one grasp, made at random, caught hundreds. I did not succeed in rearing the moth. It would be interesting to follow out the history of this, probably new, species, which occurs on the alps in millions, compared with which our most common *Tineæ* may be accounted rarities.

*Liparis monacha**, *dispar*, *salicis*, *chrysorrhæa*, *auriflua***.

Orgyia pudibunda, *fascellina*, *antiqua**.

Pygæra anastomosis, *reclusa*, *anachoreta*, *curtula*, *bucephala**.

Gastropacha betulifolia, *quercifolia*, *pini*, *pruni*, *potatoria*, *medicaginis*, *quercus*, *rubi*, *populi*, *cratægi*, *processionea*, *lanestris*, *neustria**.

Euprepia cribrum, *pulchra**. *E. grammica*; a variety with the lower wings entirely black is found in the subalpine districts, but more frequently in Lower Carinthia. About Salzburg this species has not occurred. *E. russula*, *jacobæ**. *E. plantaginis* var. *hospita*, with the lower wings white, on the highest alpine meadows in August. *E. matronalis*, Fr., seems to be rare in the Carinthian mountains. In all my repeated excursions I found but two specimens near the Mer de Glace. Its flight in the daytime is rapid and sustained, and it is hard to catch, from the precipitous nature of the ground. *E. dominula*, *hera*, *purpurea*, *aulica**. *E. matronula*; the caterpillar of this species, sought for with little success by other methods where there were traces of its presence, was obtained by removing the thin layer of turf from the rocky under-soil. *E. caja*, a ♀ freshly disclosed was found in Upper Carinthia at an elevation of 4000 feet. *E. villica*, *hebe*, *fuliginosa*, *mendica*, *menthastri*, *urticæ*, *lubricipeda**.

NOCTUÆ.

Acronycta leporina, *aceris*, *megacephala*, *alni*, *ligustri*, *strigosa*, *tridens*, *psi*, *auricoma**. *A. rumicis***.

A. euphrasiæ; of the only two specimens which I took of this rare moth, which is not found about Salzburg, one was taken on the planks of the water-course at Böckstein above Gastein, the second on a garden-wall in Moell-dale, early in August.

*Diphthera ludifica*** , *orion**.

*Bryophila perla, ereptricula, fraudatricula**.

*Cymatophora xanthoceros, ruficollis, diluta, bipuncta, octogesima, 00**.

*Episema caruleocephala**. *E. graminis*, frequent in Moell-dale, sitting on heads of thistles; found more abundantly nine years before on the Rossalp, where it was flying about incessantly in the sunshine. In the beginning of August the moth was already worn.

Agrotis ocellina; I took some specimens, with very clear markings, on the meadows of the Pasterze and the Moharkopf. I never met with the species below an elevation of 5000 feet. Its time of appearance is after the middle of July. *A. alpestris*, taken several times in Moell-dale and on the lower Sattel. Season the same. *A. tritici, fumosa, obelisca, ruris, saucia, segetum, corticea, exclamationis, forcipula**. *A. suffusa**, a freshly disclosed specimen was found under a stone at an elevation of 4000 feet. *A. fatidica*; on the 3rd of August I was crossing the grassy slopes (on which the snow was lying a foot deep) behind the turn of the road above Heiligenblut, having in vain attempted to make my way above. In a little meadow where the snow was mostly melted I took an *Agrotis*, which I supposed to be new, not remembering to have ever seen it before, but which, on referring to Freyer's excellent figure, proved to be *fatidica*. It was flying with a very rapid and sustained flight, hovering over the snow-covered declivities, and at last settled on the turf close to me, where I caught it. A fortnight after I took a second, sitting on the flowers of a *Sonchus*, at an elevation of 7000 feet, while the former locality lay 1500 feet higher still. The Carinthian alps and the very verge of the snowy region appear therefore to be the native place, till now undetermined, of this rare species.

*Amphipyra tragopoginis, livida, pyramidea, typica, perflua, pyrophila, lucipeta**.

*Noctua raveda, augur, sigma, baja, candelisequa, brunnea, festiva, comma-nigrum, depuncta, rhomboidea, polygona, musiva, plecta**.

Tryphæna comes, subsequa, pronuba var. *innuba, fimbria**.

*Hadena saponariae, perplexa, capsincola***. *H. behenis* (Freyer in litt.), n. sp.* *H. cucubali, popularis, leucophæa, cespitis, atriplicis, satura, adusta, thalassina, gemina, genistæ, contigua, convergens, distans, protea**. *H. dentina** var. *ongspurgeri*, at Brettwande in Moell-dale, and appears to be confined to the alpine districts.

*Phlogophora meticolosa, lucipara**.

Miselia cæsia, a single specimen was taken on a wall below Mallnitz. *M. conspersa, comta, albimacula, filigramma, culta, oxyacanthæ, aprilina**.

*Polia chi, dysodea, saliceti, flavicincta, nigrocincta, advena, nebulosa, herbida**.

*Trachea piniperda** is not rare, yet the caterpillar has not been found to injure the plantations.

*Apamea nictitans, didyma**. *A. imbecilla*, only on the highest alps; I found it, flying in the sunshine, on the upper Sattel, where it is very rare. *A. latruncula, strigilis, testacea, basilinea**.

*Mamestra pisi, oleracea, chenopodii, brassicæ, furva, persicariæ**.

*Thyatira batis, derasa**.

*Calpe libatria**.

*Mythimna xanthographa**.

*Orthosia instabilis, munda, ypsilon, lota, macilenta, gracilis, gothica, stabilis, leucographa, cruda, congener, nitida, pistacina, litura**.

*Caradrina morpheus, cubicularis, blanda, respersa, trilinea, bilinea**.

*Leucania pallens, vitellina, impura, albipuncta, conigera, obsoleta, comma, album**.

*Gortyna flavago**.

*Xanthia echii, rufina, ferruginea, citrigo, croceago, cerago**.

*Cosmia fulvago, trapezina, retusa, subtusa, diffinis, affinis, pyralina**.

C. cuprea, flying about flowers, in the sun, on the Rossalp near Golling, and in meadows below the Tauernhaus of Rauris. The specimens taken after the middle of August were generally wasted.

*Cerastis vaccinii, glabra, satellitia**.

*Xylina vetusta, exoleta, conformis, zinckenii, rhizolitha, petrificata, conspicillaris, picta**. *X. rurea, polyodon, lithoxylea, lateritia, virens, petrorthiza***.

*Asteroscopus cassinia, nubeculosa**.

*Cleophana pinastri, linariae**.

*Cucullia abrotani, absynthii, tanaceti, umbratica, lactuca, lucifuga, asteris, verbasci**. *C. ceramanthea*, Fr.*

*Abrostola triplasia, urticae**.

*Plusia illustris, moneta, festuca, chrysitis, orichalcea, jota, percontationis, gamma**. *P. interrogationis*** , rare about Salzburg, more frequent among the lower alps. *P. ain*; I have seen but one specimen, which was found on one of the Pinzgau alps. *P. divergens* occurs at an elevation of 7000 to 8000 feet, in the meadows of the Pasterze, the Mallnitz fell, and the Moharkopf. It is remarkably wild, flying in the sunshine, about mostly inaccessible precipices, and is therefore difficult to procure.

*Anarta heliaca**.

*Heliothis ononis, dipsacea, scutosa, marginata, delphinii**.

*Acontia solaris, luctuosa**.

*Erastria sulphurea, fuscula, paula**.

*Ophiusa lunaris**.

*Catephia alchymista**.

*Mania maura**.

*Catocala fraxini, elocata, nupta, dilecta, sponsa, promissa, electa, agamus, paranympa**.

*Brephos parthenias**.

*Euclidia glyphica, mi**.

*Platypteryx spinula, falcula, hamula, unguicula, lacertula**.

The above catalogue has not yet been carried further than the *Noctuae*. The extract given is considerably abridged, omitting the specifications of locality, &c. (except as regards the alpine species) and the detailed descriptions of the new species. Those which are found in the environs of Salzburg are here denoted by an asterisk, placed at the end of the paragraph or after the single species. The double asterisk denotes those found also in Upper Carinthia and in the valley of the Moell in particular.